

**EFFECTIVENESS OF THE TM INTRANET WEBSITE**

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# **EFFECTIVENESS OF THE TM INTRANET WEBSITE**

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partial  
fulfillment of the requirements for the degree of  
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University Utara Malaysia**

**By  
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## **ABSTRAK**

Tujuan penyelidikan ini adalah untuk mengkaji keberkesanan penggunaan web intranet TM Berhad dalam menyampaikan maklumat terkini dan polisi syarikat dalam menangani penghayatan anggota TM dalam kerja harian mereka dan mencadangkan satu penambahbaikan kepada system tersebut. Dalam penyelidikan ini juga anggota TM yang menggunakan Intranet telah diselidik dan keputusan menunjukkan terdapat empat faktor penting mempengaruhi keberkesanan sistem tersebut. Faktornya ialah tindakbalas dan geraklaku anggota itu sendiri, system dan teknologi, interaksi interaktif dan..... Kesemua faktor tersebut telah dibincangkan secara terperinci dan sejauh mana keberkesanan dan peranan sistem intranet dalam penjanaan maklumat kepada anggota-anggota TM Berhad..

## **ABSTRACT**

The purpose of this research is to study the effectiveness of the TM online information website in achieving the desired information dissemination in order for the staffs to acquire the necessary knowledge. The aims are to identify the effectiveness of the TM Intranet website and to provide recommendations for the future improvement of the system. In this study, staffs using the TM Intranet environment daily at their work premises were surveyed through online survey to evaluate the intranet system. About 50 staffs were targeted to participate and the respondents were only 42. Results showed that there are three main factors that influence the effectiveness of the TM Intranet website in relation to their daily work. These factors are staffs' behavior and attitude, technology and system, and interactive applications. The paper discusses these factors in detail with an emphasis on the role of the TM Intranet website in information and knowledge dissemination for the staff in their daily work environment.

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## **LIST OF ABBREVIATIONS**

|            |                                  |
|------------|----------------------------------|
| <b>TM</b>  | <b>Telekom Malaysia</b>          |
| <b>UUM</b> | <b>Universiti Utara Malaysia</b> |

## **CHAPTER 1**

### **1.1 INTRODUCTION**

TM Berhad is the pioneer and biggest telecommunication provider in the country as such it has to identify itself as a leader. TM Berhad is the number one telecommunication service provider in the country. With a large workforce of about 27,000 employees (extracted from the TM head quarters news release), the immense contributions of its people have accomplished high growth and achievement for the company.

In recognition TM as a responsible employer is committed to develop its people to meet the demanding challenges of the business environment. TM has continuously emphasized the need to upgrade and develop multi-disciplinary skills and competencies of its people. Various human resource development programs are constantly implemented to ensure that this philosophy is strictly adhered to.

Intranets are the identity of a company in this era of technology. A good intranet website will help to promote the company within and globally. In TM Berhad we have a company which is the leading telecommunication provider in Malaysia. With a big workforce locally and internationally TM has created an identity as a regional telecommunication provider. To remain relevant TM has embarked on variety of programs to enhance its performance and capability to face challenges in the ever changing global market.

The TM Berhad intranet website is one such initiative which will enable the staffs to identify themselves with the company. For a company to be well known among its staffs the intranet plays a very useful part in their daily needs

The contents of  
the thesis is for  
internal user  
only

## REFERENCES

Afolabi, M. (1992) 'The review of related literature in research' *International journal of information and library research*, vol. 4, no. 1, pp. 59-66.

Bourner, T. (1996) 'The research process: four steps to success', in Greenfield, T. (ed), *Research methods: guidance for postgraduates*, Arnold, London.

Bruce, C. S. (1994) 'Research student's early experiences of the dissertation literature review' *Studies in Higher Education*, vol. 19, no. 2, pp. 217-229.

Hassan, S., and Li, F. (2001) Evaluating Web Usability: the SCANMIC Factors, *8<sup>th</sup> European Conference on IT Evaluation (ECITE 2001) Proceedings*, Oriel College, Oxford, 527-532.

Institute of Electrical Engineers. (1990). *IEEE Standard Computer Dictionary*. New York.

Jaeger, P.T. (2004) 'Beyond Section 508: the spectrum of legal requirements for accessible e-government websites in the United States', *Journal of Government Information*, vol-30, No.4 pp.518-533.

Jaeger, P.T. (2006) 'Accessing Section 508: compliance on federal e-government Web sites: a multimethod, user-centered evaluation of accessibility for persons with disabilities', *Government Information Quarterly*, Vol.23, No.2, pp.169-190.

Kai H. Lim. and Izak Benbasat. (2000) *The Effect of Multimedia on Perceived Equivocality and Perceived Usefulness of Information Systems*, Management Information Systems Research Center, University of Minnesota at <http://www.jstor.org/stable/3250969> (access date: 16 August 2008).

Keeker, K. (1998) Improving Web Site Usability and Appeal. *Microsoft Web Workshop* at <http://msdn.microsoft.com/workshop/management/planning/improvingsiteuser.asp> (access date: August 2008).

Legris, P., Ingham, J. & Colletette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model, *Information & Management*, Vol. 40, pp. 1 – 14.

MacKenzie, I.S. & S.X. Zhang. (1999) The design and evaluation of a high-performance soft keyboard. *Proceedings of CHI'99: ACM Conference on Human Factors in Computing Systems*. 1999. p. 25-31.

Marcus, A. (1999) *Improving the User Interface* at <http://www.webward.com/interviews/marcus.html> (access date: August 2008).

Maryam Alavi and Dorothy E. Leidner (2001). Knowledge Management and Knowledge Management Systems: *Conceptual Foundations and Research Issues*: MIS Quarterly, Vol. 25, No. 1, (Mar., 2001), pp. 107-136. Management Information Systems Research Center, University of Minnesota Stable. URL: <http://www.jstor.org/stable/3250961> Accessed: 16/08/2008

Mick P. Couper. (Winter 2000) Web Surveys: A Review of Issues and Approaches  
*The Public Opinion Quarterly*, Published by: Oxford University Press on behalf of the American Association for Public Opinion Research. 2000. Vol. 64, No. 4, pp. 464-494

Nielsen, J. (2000). *Designing Web Usability: The Practice of Simplicity*. New Riders: New York.

Nielsen, J. (1993). *Usability Engineering*, Academic Press: San Diego.

Norshuhada S. (2002) *Innovative Features of E-Books and E-Books Builders*, PhD thesis, University of Strathclyde: Glasgow.

Rosenberg, M.J. (2001), "E-learning: strategies for delivering knowledge in the digital age", available at: <http://reach.ucf.edu/~eme6457/main.html> (accessed 22 April 2007).

Sears, A., J.A. Jacko, J. Chu, and F. Moro (2001) The role of visual search in the design of effective soft keyboards. *Behaviour and Information Technology*, 2001. 20(3): p. 159-16

Shiratudin, N., Hassan, S., & Landoni, M. (2003). A Usability Study for Promoting eContent in Higher Education. *Educational Technology & Society*, 6(4), 112-124, Available at [http://ifets.iee.org/periodical/6\\_4/11.pdf](http://ifets.iee.org/periodical/6_4/11.pdf)

Shackel, B. (1986). Ergonomics in design for usability. In Harrison, M., and Monk, A. (eds) *People and computers: Proc. 2nd conf. BCS HCI specialist group*, pp. 45-64. Cambridge: Cambridge University Press.

WWWebster Dictionary, (1999) Meriam-Webster at <http://www.m-w.com> (access date: September 2008).

Zhai, S., B.A. Smith, and M. Hunter (2001). Performance Optimization of Virtual Keyboards. *Human-Computer Interaction*, 2001.



Fok, C.Y. (2001). *Self-efficacy of an Individual on Internet Use in Organisations*, MBA Dissertation, School of Management, Universiti Sains Malaysia, Penang.

Othman, R., Said, J. and Nasir, N.M. (2001). *Internet reporting by local authorities in Malaysia*, IFSALGAR 2001 Conference proceedings.